



The Role of Gender in Worry and Efforts to Cope during Stressful Waiting Periods

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Abstract

Waiting for personally significant news is a near-universal experience, but people differ in how they cope with these acute moments of uncertainty. The present study examined whether self-identified men and women differ reliably in how they experience and cope with uncertain waiting periods, given societal pressures toward (for men) or against (for women) emotional experiences that may be relevant in these moments. Across 20 U.S. studies in field and laboratory settings (total $n = 4714$), we examined gender differences in worry and use of coping strategies during various waiting periods. We then explored whether gender moderated links between worry and use of coping strategies to determine whether gender meaningfully shapes the coping process or if worriers require a larger toolbox of coping strategies, regardless of their gender. Mini meta-analyses across our studies confirmed that women reported greater worry and greater use of coping strategies than did men. However, the relationships between gender and coping largely disappeared after controlling for worry, and gender did not consistently or strongly moderate the link between worry and coping. These findings suggest that despite apparent gender differences in the experience of stressful uncertainty, worry is a far more potent predictor of coping than is gender.

Keywords Gender · Waiting · Worry · Uncertainty · Coping

Among the countless well-trodden stereotypes of mothers and fathers, a particularly common one is that mothers are worriers. Imagine the parents of a teenager who stays out far past curfew. In the typical familial script (and in the experience of the authors), the mother lays awake fretting until her child returns home safe and sound, whereas the father snores beside her with complete confidence that all is well. In fact, research supports this familiar portrait of parenthood. On average, stressors loom larger for women than for men (Gutteling and

Wiegman 1993; Tamres et al. 2002), and women engage in coping behaviors more so than do men (Jordan and Revenson 1999). These patterns emerge across various types of stressors; however, they may be particularly profound in moments of uncertainty when anxiety, and worry specifically, is the dominant emotional experience (Boivin and Lancaster 2010; Sweeny and Falkenstein 2015). In the present paper, we present the results from 20 studies examining the role of gender in experiences across a variety of stressful waiting periods, including the wait for academic, professional, social, and political news. Specifically, we compared levels of worry and patterns in the use of coping strategies among nearly 5000 self-identified men and women awaiting personally important news and examined whether gender moderates links between worry and coping processes in these moments.

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Coping with Waiting

Despite stereotypes to the contrary, men and women are far more similar than they are different (Hyde 2005). However, a large body of evidence points to reliable gender differences in reactions to threatening and stressful experiences.

Specifically, research on stress and coping finds that women tend to engage more in emotion-focused coping strategies than do men (Brougham et al. 2009; Matud 2004; Ptacek et al. 1994; Sigmon et al. 1995). Emotion-focused coping, as compared to problem-focused coping, entails addressing the distress associated with a challenging life event or experience rather than attempting to alter or address the event itself (e.g., Folkman and Lazarus 1980; Folkman and Moskowitz 2004). Women's greater tendency to employ emotion-focused strategies to cope with stress has been demonstrated quite broadly, including in studies addressing daily stressors in the general population (Matud 2004) and stress among college (Brougham et al. 2009; Eaton and Bradley 2008; Guskowska et al. 2016; Stanton et al. 2000) and high school students (Flannery et al. 2018). A meta-analysis of 50 studies addressing gender differences in coping concluded that even after controlling for women's general tendency to appraise stressors as more severe, women nonetheless engage more in emotion-focused coping strategies than do men (Tamres et al. 2002).

Waiting periods induce a type of stress that is unique in some ways from other types of stressors. Most notably, the types of waiting periods of interest in our investigation (e.g., the wait for exam or election results) entail a lack of certainty about one's future outcomes combined with a lack of control over those outcomes (Sweeny 2018). These circumstances call for a unique set of coping strategies, as outlined in the uncertainty navigation model (Sweeny and Cavanaugh 2012): consequence mitigation, reappraisal, and direct emotion management. The strategy of consequence mitigation aims to minimize ill-effects that may arise if the future brings bad news. Consequence mitigation can aim to reduce either objective consequences of bad news (referred to as preventive action) or psychological consequences (referred to as proactive coping). In both cases, people attempt to get their metaphorical ducks in a row in an effort to prepare for the worst.

Reappraisal during waiting periods comes in three forms: expectation management, preemptive benefit-finding, and distancing. Expectation management entails reappraising the likelihood of future outcomes, either by embracing pessimism and bracing for the worst or by embracing hope and optimism. Preemptive benefit-finding entails reappraising the negativity of a bad outcome by seeking silver linings before bad news has arrived, and distancing entails reappraising the implications of bad news by preemptively downplaying its importance or undermining its source. Finally, direct emotion management strategies bypass the psychological gymnastics of consequence mitigation and reappraisal and instead attempt to reduce anxiety in more direct ways. Direct emotion management comes in two forms: distraction from thoughts about the uncertain outcome and suppression of anxious feelings, both internally and as expressed to others.

With the arguable exception of preventive action, all coping strategies that people employ during waiting periods are largely emotion-focused. Because people do not have control over their outcome as they await news of their fate, the opportunity for problem-focused coping is naturally limited during these acute moments of uncertainty. Waiting periods are characterized by a sense of paralysis, which people must simply endure until the desired information arrives and the path ahead becomes clear. Thus, women's tendency to engage more in emotion-focused coping than men do may be particularly pertinent in these periods of stressful uncertainty.

The Role of Worry

Despite a consistent pattern of findings with regard to gender and coping, the source of the gender difference in coping remains unclear. Perhaps the most common supposition is that women engage in more emotion-focused coping than men because they are more likely to experience negative emotions than are men. Although considerable evidence debunks the broad claim that women are more "emotional" in a broad sense (Brody and Hall 2008; Kring and Gordon 1998), women particularly seem to be more anxious and fearful than men on average (see McLean and Anderson 2009, for a review). This difference manifests in higher rates of anxiety disorders among women (Bruce et al. 2005; Kessler et al. 1995), a greater tendency toward rumination (Johnson and Whisman 2013), and, most relevant to the current investigation, a greater tendency toward worry (Dugas et al. 1997, 2001; McCann et al. 1991; Robichaud et al. 2003; Zlomke and Hahn 2010).

Although evolutionary and genetic influences may be relevant to this gender difference (see McLean and Anderson 2009), we focus here on the role of socialization. From a young age, women more so than men are exposed to the message, however subtle, that experiencing and expressing certain emotions is consistent with their gender identity. For example, one study revealed that fathers were more attentive to their preschool-age daughters, compared to their sons, when their children expressed sadness and anxiety—and moreover, this attentiveness predicted children's tendency to express those emotions up to 2 years later (Chaplin et al. 2005). In fact, adults perceive fear-relevant emotions (e.g., anxiety, worry) as considerably more stereotype-consistent for women than for men (Plant et al. 2000; Stavosky and Borkovec 1987). Gender role theory (Bem 1981; see also Grossman and Wood 1993) posits that parents and other influential figures steer children toward traits and behaviors that are consistent with stereotypic beliefs about their gender and, therefore, that expressions of fear, anxiety, and worry are reinforced more in girls than in boys (McLean and Anderson 2009; Robichaud et al. 2003).

Thus, substantial evidence points to a reliable and robust gender difference in the tendency to cope with stress via emotion-focused strategies, and both theorizing and empirical evidence point to negative emotionality (particularly with regard to fear-based emotions) as a potential explanation for this difference. We therefore hypothesized that women would both express greater worry (Hypothesis 1a) and engage in greater emotion-focused coping (Hypothesis 1b) in our studies. In the current investigation, we test these links in a common and uniquely stressful context: the wait for personally significant news.

Gender researchers have compellingly argued that the study of gender differences has moved beyond the simple task of documenting such differences and into questions of when they are most and least likely to arise (Brody and Hall 2008). Thus, the goals of the current paper are twofold. First, we provide a strong test of gender differences in stress and coping processes in a context that provokes nearly everyone into a state of anxious anticipation. Studies of emotions and coping during waiting periods have documented high levels of anxiety, surpassing even the anxiety of receiving highly consequential bad news (e.g., failing the bar exam; Sweeny and Falkenstein 2015). During these acute moments of uncertainty, many coping strategies do little to alleviate worry (defined in these studies as a combination of anxiety and persistent, repetitive thoughts—distinct from the past-focused repetitive thoughts characteristic of rumination; Sweeny and Dooley 2017), in some cases even backfiring and exacerbating distress (Sweeny et al. 2016).

Second, given that waiting reliably rattles even the most upbeat, optimistic individuals (Sweeny and Falkenstein 2015), we went beyond testing simple gender differences to examine the role of gender in the link between worry and coping in these acute moments of uncertainty. Despite the finding that many coping strategies are ineffective, as we just noted, previous studies of stressful waiting periods have found that people who worry more tend to engage in most uncertainty-oriented coping strategies to a greater extent (Sweeny and Andrews 2014; Sweeny et al. 2016). Thus, we anticipated that although socialization processes might lead women to report somewhat greater worry in these moments, both men and women who worried about their uncertain future would report greater efforts to cope with the wait. That is, we tested whether gender moderated the association between worry and coping, hypothesizing that gender would not moderate this link (Prediction 2).

Overview and Approach

Data available from our lab provides the opportunity to examine the role of gender in waiting experiences across 20 studies. We generated this set of studies by examining all studies conducted in our lab on the broad topic of waiting experiences

and by including any study that documented participants' self-reported gender and that had a measure of worry and at least one measure of a relevant coping strategy. Given the challenges of presenting such a large number of studies in full methodological detail while maintaining readability, we take an unorthodox approach to our presentation of these studies. In the following, we briefly summarize key procedural details for each study and present descriptions of the measures that appear across studies, noting variations in these measures where relevant. We then focus on the results of “mini” meta-analyses (i.e., meta-analysis of one's own, novel studies; see Goh et al. 2016, for advantages of conducting mini meta-analyses across one's own studies) that summarize the effects across studies. (Full methodological details are available in our extensive [online supplement](#).)

Method

Procedures

Our investigation includes ten field studies and ten lab studies, all of which were conducted in the United States. Studies 1–4 (total $n = 486$) examined the experiences of law graduates awaiting their results on the California bar exam between 2011 and 2016. Participants in these studies completed a questionnaire prior to the exam and then a series of questionnaires (between 4 and 8 questionnaires, depending on the study) during the 4-month wait for exam results. Relevant measures appeared in all waiting questionnaires, and analyses of worry, outcome predictions, and use of coping strategies average across these questionnaires. Study 5 ($n = 148$) examined the experiences of doctoral students on the academic job market. As part of a larger longitudinal study, participants completed relevant measures in a baseline survey in October of the academic year in which they sought employment; analyses focus on that measurement point.

Study 6 ($n = 669$) examined experiences of U.S. voters in the 2 months prior to the 2016 presidential election. Each week, we recruited 50 self-identified supporters of Donald Trump and 50 supporters of Hillary Clinton to complete a questionnaire about their feelings of uncertainty and use of coping strategies, among other measures not pertinent to the present inquiry. Study 7 ($n = 374$) similarly examined experiences of U.S. voters, this time in the days prior to the 2018 midterm election. We recruited approximately equal numbers of participants who preferred that the Republican Party retain the U.S. House of Representatives following the election ($n = 193$) and who preferred that the Democratic Party take control of the House ($n = 183$). Participants completed a one-time questionnaire of their feelings of uncertainty and use of coping strategies regarding the competition for control of the U.S. House of Representatives.

Studies 8 and 9 examined the experiences of undergraduate students awaiting a midterm grade (Study 8; $n = 137$) and a grade on an APA-style empirical paper (Study 9; $n = 66$). Participants in both studies completed a baseline questionnaire prior to the exam or submission of the paper and then completed several questionnaires while they awaited their grade. Analyses averaged across these waiting questionnaires. Study 10 ($n = 128$) examined the experiences of researchers awaiting a manuscript decision. Participants were recruited via professional organizations' listservs to complete a single questionnaire about a manuscript they currently had under review.

Turning to the lab studies (all using the psychology subject pool at the authors' university), Studies 11–13 (total $n = 631$) examined the experiences of participants awaiting their score on what was described as an intelligence test. Study 14 ($n = 399$) examined participants' experiences awaiting evaluations from peers (how likeable, trustworthy, interesting, etc. they were) with whom they interacted earlier in the study session, and Study 15 ($n = 214$) examined participants' experiences awaiting feedback from graduate students on their intelligence and social skills as depicted in a video they recorded during the study session. Studies 16–20 (total $n = 1462$) examined participants' experiences awaiting feedback about their physical attractiveness from peers who were ostensibly participating in the study in other locations on campus, based on a photograph they took earlier in the study session. In only one of these studies did participants receive the anticipated (and manipulated) feedback, but that portion of the study is not pertinent to this paper. All lab studies included at least one experimental manipulation not pertinent to the present inquiry (see the [online supplement](#) for details), and all studies were reviewed and approved by the IRB at the University of California, Riverside.

Worry

Worry was operationalized as a combination of anxiety and repetitive, persistent thoughts about the anticipated outcome (see Sweeny and Dooley 2017) and assessed with three items: "I am worried about [outcome]," "I feel anxious every time I think about [outcome]," and "I can't seem to stop thinking about [outcome]." Worry was assessed in all 20 studies (average Cronbach's $\alpha = .85$, range = $.73$ – $.91$).

Coping Strategies

Consequence Mitigation

Measures of preventive action were included in seven studies, and measures of proactive coping were included in ten studies. Participants in Studies 2–8 completed a single-item measure of preventive action (e.g., "How much effort have you put toward trying to minimize the problems that would occur if

[negative outcome]?"), and participants in Studies 2–8, 11, 12, and 20 completed a single-item measure of proactive coping (e.g., "How much time have you spent thinking about how you'll cope if [negative outcome]?").

Reappraisal

Regarding expectation management, participants in all studies completed a two-item measure of bracing for the worst ("I am bracing for the worst when it comes to [outcome]" and "I want to make sure I keep my expectations low when it comes to [outcome]"; average $r = .64$, range = $.46$ – $.73$), and participants in all but three studies (Studies 13, 15, and 17) completed a two-item measure of hope and optimism ("I'm trying to be optimistic about [outcome]" and "I'm hoping for the best when it comes to [outcome]"; average $r = .57$, range = $.44$ – $.69$).

Preemptive benefit-finding was assessed in all field studies (Studies 1–10) and in five lab studies (Studies 11, 12, 14, 16, and 20). Measures varied somewhat between studies. The most common measure was three items (8 studies: "It might be for the best if [negative outcome]," "I feel like I would grow as a person if [negative outcome]," and "I feel I'll learn something from the experience if [negative outcome]"; average Cronbach's $\alpha = .77$, range = $.65$ – $.86$). Other studies used a subset of these items, and some added the more explicit item: "I have been trying to focus on good things that might come from [negative outcome]."

Distancing was assessed in the same studies as was preemptive benefit-finding, with the exception of Studies 6, 7, and 10. Measures again varied somewhat across studies, but all measures included between three to five statements regarding the validity of the target evaluation or outcome (e.g., "The bar exam is not a good indicator of my ability to practice law," "Attractiveness is a matter of opinion," or "This test is a valid measure of intelligence"; average Cronbach's $\alpha = .61$, range = $.18$ – $.86$). Although the internal reliability for the measure of distancing was quite low in some cases, the measure captures several distinct facets of distancing, which combine to create a coherent measure of the construct.

Direct Emotion Management

Distraction efforts were assessed in 14 studies, in all cases except one with a single item ("I've been trying to distract myself from thinking about [outcome]"; Study 4 used four items, Cronbach's $\alpha = .83$). Suppression efforts were assessed in 13 studies, with two items ("I've been trying to stop myself from thinking about [outcome]" and "I've been trying to hide my feelings about [outcome]"; average $r = .73$, range = $.53$ – $.80$; two studies used four items, α s = $.81$ and $.93$).

Results

Initial analyses proceeded in three stages. First, to test Hypotheses 1a and 1b, we conducted independent samples *t*-tests comparing men and women on each dependent variable in each study. Effect size *r*s for those analyses appear in Tables 1 (or the field studies) and 2 (for the lab studies), along with the mini meta-analysis of these effects in Table 3. We then ran simple correlations between worry and coping to establish the link observed in previous studies of waiting, such that people who worry more also engage in coping to a greater extent. Table 4 presents average correlations between worry and coping across studies. (Study-specific correlations are available in the [online supplement](#).) All confidence intervals did not include zero, indicating that all correlations were significant ($p < .05$).

Finally, to test Prediction 2, we ran multiple regression analyses predicting each coping strategy from worry (centered), gender ($-0.5 = \text{male}$, $+0.5 = \text{female}$), and their interaction. Main effects from these models are available in the [online supplement](#), and the interaction effects for each study are presented in Tables 5 and 6, with a mini meta-analysis of these effects in Table 7. For each mini meta-analysis, we first conducted them separately for field and lab studies, then across all 20 studies.

Gender Comparisons

Consistent with Hypothesis 1a, women reported reliably greater worry across studies (see Tables 1, 2 and 3). Our analyses also supported the hypothesis that women would report engaging in nearly all coping strategies to a greater extent than men would, consistent with Hypothesis 1b, although preventive action did not show a gender difference and the preemptive benefit-finding fell short of statistical significance in the mini meta-analysis. Given the notable differences between field studies (which addressed real-world waiting periods using online surveys) and lab studies (which addressed contrived waiting periods using in-person surveys), we examined these gender differences separately by type of study (see Table 3's top two rows). Findings were generally consistent between field and lab studies, with two notable exceptions in which the confidence intervals for each type of study were non-overlapping. Specifically, the effect of gender on bracing was considerably stronger in lab studies than in field studies, and the effect of gender on preemptive benefit-finding was driven entirely by lab studies. (Note that no lab study included a measure of preventive action.)

Moderation of the Worry-Coping Link

We next turn to the question of whether gender moderated the link between worry and coping. First, note that worry was consistently correlated with each of the coping strategies when averaging across studies (see Table 4). When examining gender's moderating role in this link (see Tables 5, 6 and 7; see the

[online supplement](#) for main effects in the regression analyses), the pattern of results was inconsistent across coping strategies, and overall the interaction between gender and worry had weak to near-zero effects on coping, consistent with Prediction 2. Focusing on the mini meta-analytic effects in Table 7 (see the bottom row), the association between worry and coping was slightly stronger for men than women when it came to bracing, preemptive benefit-finding, and preventive action. In no case was the association stronger among women than men.

We again examined these effects separately in field and lab studies (see Table 7's top two rows). The pattern of results was generally quite similar between these types of studies, although the moderation effects for preemptive benefit-finding and preventive action were driven by field studies. In addition, proactive coping showed a reverse effect in lab studies, such that the association between worry and proactive coping was stronger among women than among men in those three studies.

Secondary Analyses

Although not a primary research question, Tables 2s and 3s (see the [online supplement](#)) also reveal that associations between gender and coping largely disappeared after controlling for worry. Of 109 possible effects of gender on coping, in only 19 cases was the main effect of gender statistically significant (i.e., the confidence interval did not contain zero) after controlling for worry and the interaction between gender and worry. Of these 19 remaining main effects, in seven cases the effect was such that men reported more coping than did women. In stark contrast, 78 of the main effects of worry were significant in these models, such that participants who reported greater worry also reported greater coping (26 effects were nonsignificant; 5 were in the opposite direction).

Finally, as a brief note about within-gender variability, we conducted secondary analyses to compare variability within male and female participants in five of our studies (Studies 4, 6, 12, 14, and 20), selected to provide a range of contexts (bar exam, presidential election, IQ test, social feedback, attractiveness feedback) and with relatively high power (total $n = 2130$). In no case was a test for equality of variances between male and female participants statistically significant for worry (average $F = 1.11$, average $p = .53$), and the average standard deviations in these studies were nearly identical across groups ($SD_{\text{men}} = 1.40$, $SD_{\text{women}} = 1.46$). Thus, within gender, we observed considerable variability in worry, and this variability was equivalent between men and women.

Discussion

The goal of our endeavor was twofold: (a) to examine gender differences in worry and coping during periods of acute uncertainty and (b) to test whether gender moderated the well-

Table 1 Comparisons between men and women on waiting experiences—Field studies

Context	<i>n</i>	% female	Worry		Bracing		Hope/ optimism		Distraction efforts		Suppression efforts		Preemptive benefit-finding		Distancing		Proactive coping		Preventive action	
			<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)	<i>r</i> (<i>p</i>)
Study 1 Bar exam result	50	52%	.34 (.02)	.08 (.56)	.09 (.52)	.40 (.004)	–	.07 (.65)	.15 (.27)	–	–	–	–	–	–	–	–	–	–	–
Study 2 Bar exam result	214	61%	.31 (<.001)	.22 (.001)	.01 (.88)	.31 (<.001)	.29 (<.001)	.03 (.69)	.08 (.22)	.15 (<.001)	.22 (.03)	.15 (.32)	.19 (.03)	.15 (.17)	.11 (.32)	.14 (.21)	.22 (.03)	.03 (.69)	.08 (.22)	.03 (.69)
Study 3 Bar exam result	90	56%	.24 (.03)	.08 (.45)	–.07 (.50)	.22 (.04)	.24 (.02)	.07 (.52)	.15 (.17)	.11 (.32)	.14 (.21)	.23 (.03)	.19 (.03)	.18 (.18)	.23 (.03)	.23 (.03)	.23 (.03)	.23 (.03)	.23 (.03)	.23 (.03)
Study 4 Bar exam result	132	61%	.28 (<.001)	.28 (.001)	–.02 (.82)	.24 (.005)	.29 (.001)	.01 (.93)	.18 (.03)	.19 (.03)	.23 (.03)	.23 (.03)	.23 (.03)	.23 (.03)	.23 (.03)	.23 (.03)	.23 (.03)	.23 (.03)	.23 (.03)	.23 (.03)
Study 5 Academic job market	148	57%	.16 (.05)	–.01 (.94)	–.06 (.46)	–.01 (.95)	–.02 (.78)	–.20 (.01)	.12 (.14)	.08 (.31)	.14 (.10)	.08 (.31)	.08 (.31)	.08 (.31)	.08 (.31)	.08 (.31)	.08 (.31)	.08 (.31)	.08 (.31)	.08 (.31)
Study 6 2016 presidential election	669	44%	.18 (<.001)	–.05 (.21)	.13 (<.001)	.03 (.38)	.01 (.81)	–.03 (.49)	–	–	–	–	–	–	–	–	–	–	–	–
Study 7 2018 midterm election	374	45%	.07 (.17)	–.06 (.24)	.09 (.09)	–.05 (.36)	–.08 (.14)	–.05 (.32)	–	–	–	–	–	–	–	–	–	–	–	–
Study 8 Midterm grade	137	68%	.30 (<.001)	.26 (.002)	.03 (.72)	.24 (.006)	.25 (.004)	.11 (.22)	–.06 (.47)	.02 (.81)	.08 (.37)	.02 (.81)	.02 (.81)	.02 (.81)	.02 (.81)	.02 (.81)	.02 (.81)	.02 (.81)	.02 (.81)	.02 (.81)
Study 9 Paper grade	66	76%	.19 (.12)	.25 (.04)	–.24 (.06)	–	–	–.04 (.72)	–.03 (.91)	–	–	–	–	–	–	–	–	–	–	–
Study 10 Manuscript submission	129	52%	.10 (.24)	.15 (.09)	–.03 (.76)	.03 (.77)	.07 (.40)	.06 (.47)	–	–	–	–	–	–	–	–	–	–	–	–

r effect sizes for independent *t*-tests between self-identified men and women, with *p*-values below each in parentheses. Positive effect sizes indicate that the mean for women was higher; negative effect sizes indicate that the mean for men was higher

Table 2 Comparisons between men and women on waiting experiences—Lab studies

Context	<i>n</i>	% female	Worry <i>r</i> (<i>p</i>)	Bracing <i>r</i> (<i>p</i>)	Hope/ optimism <i>r</i> (<i>p</i>)	Distraction efforts <i>r</i> (<i>p</i>)	Suppression efforts <i>r</i> (<i>p</i>)	Preemptive benefit-finding <i>r</i> (<i>p</i>)	Distancing <i>r</i> (<i>p</i>)	Proactive coping <i>r</i> (<i>p</i>)	Preventive action <i>r</i> (<i>p</i>)
Study 11 Pseudo-IQ score	89	64%	.12 (.27)	.26 (.01)	.41 ($<.001$)	.33 (.002)	.26 (.02)	.13 (.23)	-.15 (.17)	.13 (.21)	—
Study 12 Pseudo-IQ score	330	67%	.23 ($<.001$)	.16 (.003)	.19 ($<.001$)	.12 (.03)	.12 (.04)	.16 (.003)	.15 (.007)	-.01 (.86)	—
Study 13 Pseudo-IQ score	212	58%	.11 (.10)	.19 (.004)	—	—	—	—	—	—	—
Study 14 Social feedback	399	66%	.11 (.04)	.07 (.18)	.09 (.09)	.09 (.08)	.08 (.10)	.10 (.04)	-.02 (.10)	—	—
Study 15 Social feedback	214	56%	.10 (.15)	.07 (.31)	—	—	—	—	—	—	—
Study 16 Photo ratings	318	68%	.16 (.002)	.08 (.09)	.07 (.21)	.12 (.02)	.09 (.08)	.03 (.59)	.12 (.03)	—	—
Study 17 Photo ratings	140	59%	.19 (.03)	.16 (.06)	—	—	—	—	—	—	—
Study 18 Photo ratings	229	65%	.26 ($<.001$)	.32 ($<.001$)	.05 (.48)	—	—	—	—	—	—
Study 19 Photo ratings	196	60%	.12 (.08)	.19 (.009)	-.11 (.13)	—	—	—	—	—	—
Study 20 Photo ratings	579	65%	.21 ($<.001$)	.17 ($<.001$)	-.08 (.06)	.09 (.04)	.12 (.003)	.01 (.73)	.12 (.005)	.21 ($<.001$)	—

r effect sizes for independent *t*-tests between self-identified men and women, with *p*-values below each in parentheses. Positive effect sizes indicate that the mean for women was higher; negative effect sizes indicate that the mean for men was higher

Table 3 Meta-analysis of gender differences across studies

	Worry <i>r</i> [95% CI]	Bracing <i>r</i> [95% CI]	Hope/ optimism <i>r</i> [95% CI]	Distraction efforts <i>r</i> [95% CI]	Suppression efforts <i>r</i> [95% CI]	Preemptive benefit-finding <i>r</i> [95% CI]	Distancing <i>r</i> [95% CI]	Proactive coping <i>r</i> [95% CI]	Preventive action <i>r</i> [95% CI]
Field	.19 [.15, .23] <i>n</i> = 2009	.05 [.01, .10] <i>n</i> = 2009	.05 [.004, .09] <i>n</i> = 2009	.09 [.04, .13] <i>n</i> = 1943	.08 [.03, .12] <i>n</i> = 1764	-.02 [-.06, .03] <i>n</i> = 2009	.08 [.01, .15] <i>n</i> = 837	.07 [.03, .12] <i>n</i> = 1764	.03 [-.02, .07] <i>n</i> = 1764
Lab	.17 [.13, .21] <i>n</i> = 2706	.15 [.12, .19] <i>n</i> = 2706	.05 [.006, .09] <i>n</i> = 2140	.11 [.07, .16] <i>n</i> = 1715	.11 [.07, .16] <i>n</i> = 1715	.07 [.02, .12] <i>n</i> = 1715	.08 [.03, .13] <i>n</i> = 1715	.13 [.07, .19] <i>n</i> = 998	—
All	.18 [.15, .21] <i>n</i> = 4715	.11 [.08, .14] <i>n</i> = 4715	.05 [.02, .08] <i>n</i> = 4149	.10 [.07, .13] <i>n</i> = 3658	.09 [.06, .12] <i>n</i> = 3608	.02 [-.008, .06] <i>n</i> = 3724	.08 [.04, .12] <i>n</i> = 2552	.09 [.06, .13] <i>n</i> = 2762	.03 [-.02, .07] <i>n</i> = 1764

Overall meta-analytic effects are weighted *r* effect sizes. Positive effect sizes indicate that the mean for women was higher; negative effect sizes indicate that the mean for men was higher

established links between worry and coping. Our hypotheses were in part guided by evidence of differential socialization in men's and women's emotional expression, particularly with regard to fear-based emotions like worry and emotion-focused coping. We brought to bear a large set of studies across various domains to ensure the reliability of our findings.

Supporting Hypotheses 1a and 1b, women suffered particularly intense worry across studies, and women more readily engaged in a broad set of coping strategies that are largely emotion-focused in nature. That is, we found evidence for broad gender differences in the experience of stressful uncertainty. Of course, our findings relied on self-report measures across the board, leaving open the possibility that women simply felt more comfortable reporting on their worry and coping efforts than did men. However, two points provide some reassurances that our findings reflect more than self-presentational effects. First, previous work has carefully delineated between emotional experience and expression, and those studies confirm that women *both* express and experience fear-based emotions (including worry) more so than do men (Brody and Hall 2008). Second, it is difficult to imagine why men would be reluctant to report that they, for example, were embracing hope and optimism or planning for the worst. In fact, women consistently reported greater suppression efforts compared to men, despite considerable evidence pointing to men's greater emotion-suppressive tendencies (Gross and John 2003). Thus, it seems that in the context of uncertain waiting periods, women's tendency toward emotion-focused coping dominated differences that might arise in less acute contexts.

Although the gender differences we identified were consistent with our expectations and with previous work on differential socialization of boys and girls, we went beyond simple gender differences to test a deeper question about the processes underlying stressful uncertainty: When women and men worry equally about an uncertain outcome, do they meet those worries with equal efforts to cope? In short, our findings suggest that the answer is yes, thus supporting Prediction 2. That is, gender did not consistently moderate the link between worry and efforts to cope with that worry. In the cases of bracing for the worst, preemptive benefit-finding, and preventive action, men showed a somewhat stronger link between worry and use of these coping strategies; however, the difference in strength (i.e., the interaction effect) in even these cases was quite small. Furthermore, in regression models that included gender, worry, and their interaction as predictors of coping, worry was a far more robust predictor of coping than was gender. Taken together, our findings suggest that although women may be more likely to get caught on the seesaw of worry and concomitant efforts to cope, within-gender variability in worry is a more potent predictor of patterns of coping during stressful waiting periods. In this way, our multi-study

Table 4 Mini meta-analysis of correlations between worry and use of coping strategies

	Bracing <i>r</i> [95% CI]	Hope/ optimism <i>r</i> [95% CI]	Distraction efforts <i>r</i> [95% CI]	Suppression efforts <i>r</i> [95% CI]	Preemptive benefit-finding <i>r</i> [95% CI]	Distancing <i>r</i> [95% CI]	Proactive coping <i>r</i> [95% CI]	Preventive action <i>r</i> [95% CI]
Mini meta-analytic correlation with worry	.50 [.48, .52] <i>n</i> = 4715	.11 [.08, .14] <i>n</i> = 4149	.54 [.51, .56] <i>n</i> = 3658	.57 [.55, .59] <i>n</i> = 3608	.09 [.06, .12] <i>n</i> = 3724	.12 [.08, .16] <i>n</i> = 2552	.40 [.37, .43] <i>n</i> = 2762	.21 [.16, .25] <i>n</i> = 1764

Meta-analytic effects are weighted *r* effect sizes, with 95% confidence intervals in brackets below

synthesis goes beyond simply documenting gender differences to identify key consequences of these differences when they arise.

Limitations and Future Research Directions

The current investigation marshaled a bevy of evidence from nearly 4000 U.S. participants in the highest-powered tests, with nearly equal representation of men and women, and a diverse range of populations, methodologies, and contexts. The studies varied in a number of ways, including the domain of uncertainty (e.g., professional, social, political), the importance of the outcome (e.g., bar exam results vs. course exam grades), the study design (longitudinal, cross-sectional, or experimental), and the nature of the sample (e.g., undergraduates, doctoral and law students, U.S. voters). We further examined our research questions across a large set of both field and lab studies, and very few findings differed substantially between them. Thus, we made every effort to ensure that our findings are robust and generalizable.

Nonetheless, our investigation was limited in several notable ways. First, although our findings were generally consistent with our predictions, they varied considerably in the size of the effects. Regarding broad gender differences, the meta-analytic difference for worry was the largest (effect size $r = .18$), whereas differences in men's and women's use of coping strategies ranged from quite small (smallest effect size $r = .02$) to moderate (largest effect size $r = .11$). Associations between worry and coping also ranged in magnitude, such that the strongest associations were quite large ($r_s \geq .50$ for bracing, distraction, and suppression) and the smallest were small-to-moderate (r_s of .09 and .11 for preemptive benefit-finding and hope/optimism, respectively). Finally, the interaction effects between gender and worry on coping were negligible across the board, although they ranged from essentially zero to small yet statistically significant.

Second, due to the large number of studies (20) and the relatively large set of coping strategies examined here (8), the total number of statistical tests was also quite large. We did not use any correction to reduce alpha inflation, opting instead to focus on the results of mini meta-analyses rather than individual *t*-tests, correlations, or regression coefficients. This approach should be quite robust to variations in effect sizes and statistical significance due to chance alone. That is, we do not interpret any particular effect among the large number of study and strategy-specific tests; instead, we focus entirely on the synthesized findings of mini meta-analyses, thus reducing the influence of any particular effect (which in itself might be spurious).

Finally, the detailed methods presented for each study in the [online supplement](#) reveal that the internal reliability of some coping measures was quite low in some studies. This problem is particularly notable for measures of distancing in

Table 5 Moderation of the worry-coping link by gender—Field studies

	<i>n</i>	Bracing β [95% CI]	Hope/ optimism β [95% CI]	Distraction efforts β [95% CI]	Suppression efforts β [95% CI]	Preemptive benefit-finding β [95% CI]	Distancing β [95% CI]	Proactive coping β [95% CI]	Preventive action β [95% CI]
Study 1	50	-.19 [-.41, .03]	.09 [-.20, .39]	-.05 [-.22, .12]	—	.12 [-.18, .41]	-.08 [-.37, .21]	—	—
Study 2	214	-.02 [-.14, .11]	-.08 [-.22, .05]	-.01 [-.10, .08]	.04 [-.05, .13]	-.15 [-.29, -.02]	.07 [-.07, .21]	-.02 [-.15, .10]	-.03 [-.16, .11]
Study 3	90	-.02 [-.21, .17]	-.20 [-.40, .004]	-.06 [-.21, .08]	.01 [-.12, .14]	.03 [-.19, .24]	.08 [-.13, .30]	-.12 [-.30, .07]	-.18 [-.38, .03]
Study 4	132	-.05 [-.21, .11]	-.01 [-.19, .17]	-.07 [-.23, .09]	-.05 [-.20, .10]	-.16 [-.34, .01]	-.18 [-.34, -.01]	.02 [-.12, .15]	.001 [-.16, .17]
Study 5	148	.02 [-.16, .19]	-.16 [-.33, .01]	-.03 [-.20, .15]	.18 [.01, .35]	.04 [-.13, .21]	-.01 [-.18, .17]	-.18 [-.35, -.02]	-.27 [-.44, -.10]
Study 6	669	.01 [-.06, .08]	.03 [-.05, .10]	.04 [-.03, .11]	.02 [-.05, .09]	-.01 [-.09, .06]	—	.04 [-.02, .11]	-.003 [-.08, .07]
Study 7	374	-.09 [-.18, .01]	.06 [-.04, .16]	-.13 [-.23, -.04]	-.13 [-.22, -.03]	-.14 [-.24, -.04]	—	.01 [-.08, .10]	-.08 [-.17, .02]
Study 8	137	-.20 [-.35, -.03]	.15 [-.04, .34]	.04 [-.07, .16]	.05 [-.07, .16]	-.19 [-.38, -.01]	-.11 [-.29, .07]	-.13 [-.29, .04]	-.12 [-.30, .06]
Study 9	66	-.08 [-.29, .12]	-.14 [-.39, .11]	—	—	-.31 [-.56, -.05]	.07 [-.18, .33]	—	—
Study 10	129	-.17 [-.32, -.01]	-.06 [-.24, .12]	.02 [-.13, .18]	.04 [-.12, .20]	.03 [-.15, .21]	—	—	—

Standardized betas for the interaction between gender (male = -.5, female = +.5) and worry predicting each coping strategy, with 95% CI in brackets below each estimate. A negative interaction effect indicates that the relationship is stronger among men; a positive effect indicates that the relationship is stronger among women. For main effects of gender and worry, see the [online supplement](#)

Table 6 Moderation of the worry-coping link by gender—Lab studies

	<i>n</i>	Bracing β [95% CI]	Hope/optimism β [95% CI]	Distraction efforts β [95% CI]	Suppression efforts β [95% CI]	Preemptive benefit-finding β [95% CI]	Distancing β [95% CI]	Proactive coping β [95% CI]	Preventive action β [95% CI]
Study 11	89	.02 [-.16, .20]	-.08 [-.28, .11]	.12 [-.05, .30]	.16 [.003, .32]	.02 [-.19, .23]	-.28 [-.49, -.07]	.09 [-.10, .28]	—
Study 12	330	-.03 [-.14, .08]	-.06 [-.18, .06]	.01 [-.09, .11]	.04 [-.05, .13]	-.03 [-.15, .09]	.06 [-.07, .18]	.13 [-.03, .29]	—
Study 13	212	-.01 [-.13, .10]	—	—	—	—	—	—	—
Study 14	399	-.09 [-.18, .005]	-.08 [-.19, .02]	.07 [-.02, .15]	.01 [-.07, .09]	-.03 [-.13, .07]	.03 [-.08, .13]	—	—
Study 15	214	-.07 [-.17, .03]	—	—	—	—	—	—	—
Study 16	318	-.11 [-.21, -.003]	-.04 [-.16, .08]	-.03 [-.13, .07]	-.01 [-.11, .08]	.01 [-.11, .14]	-.02 [-.14, .11]	—	—
Study 17	140	-.05 [-.19, .08]	—	—	—	—	—	—	—
Study 18	229	-.09 [-.20, .02]	-.05 [-.20, .09]	—	—	—	—	—	—
Study 19	196	-.02 [-.14, .10]	.03 [-.12, .18]	—	—	—	—	—	—
Study 20	579	.01 [-.07, .08]	.0003 [-.09, .09]	.003 [-.07, .08]	.03 [-.05, .10]	-.04 [-.13, .05]	.05 [-.03, .14]	.11 [.04, .18]	—

Standardized betas for the interaction between gender (male = -.5, female = +.5) and worry predicting each coping strategy, with 95% CI in brackets below each estimate. A negative interaction effect indicates that the relationship is stronger among men; a positive effect indicates that the relationship is stronger among women. For main effects of gender and worry, see the [online supplement](#)

Table 7 Mini meta-analysis of moderation effects

	Bracing Avg. β [95% CI]	Hope/ optimism Avg. β [95% CI]	Distraction efforts Avg. β [95% CI]	Suppression efforts Avg. β [95% CI]	Preemptive benefit-finding Avg. β [95% CI]	Distancing Avg. β [95% CI]	Proactive coping Avg. β [95% CI]	Preventive action Avg. β [95% CI]
Field	-.05 [-.09, -.006] <i>n</i> = 2009	-.005 [-.05, .04] <i>n</i> = 2009	-.02 [-.06, .03] <i>n</i> = 1943	.003 [-.04, .05] <i>n</i> = 1893	-.07 [-.11, -.03] <i>n</i> = 2009	-.02 [-.09, .05] <i>n</i> = 837	-.01 [-.06, .03] <i>n</i> = 1764	-.06 [-.11, -.02] <i>n</i> = 1764
Lab	-.05 [-.08, -.007] <i>n</i> = 2706	-.04 [-.08, .007] <i>n</i> = 2140	.02 [-.03, .07] <i>n</i> = 1715	.03 [-.02, .07] <i>n</i> = 1715	-.02 [-.07, .02] <i>n</i> = 1715	.02 [-.03, .06] <i>n</i> = 1715	.11 [.05, .18] <i>n</i> = 998	–
All	-.05 [-.08, -.01] <i>n</i> = 4715	-.02 [-.05, .01] <i>n</i> = 4149	-.001 [-.03, .03] <i>n</i> = 3658	.01 [-.02, .05] <i>n</i> = 3608	-.05 [-.08, -.02] <i>n</i> = 3724	.005 [-.03, .04] <i>n</i> = 2552	.03 [-.005, .17] <i>n</i> = 2762	-.06 [-.11, -.02] <i>n</i> = 1764

Avg. β = average beta. Meta-analytic effects are weighted effect sizes based on β s (treated like *r*s for meta-analytic calculations; see Bowman 2012). A negative interaction effect indicates that the relationship is stronger among men; a positive effect indicates that the relationship is stronger among women

the five lab studies that included such a measure, with an average Cronbach's alpha of only .37 for those studies. In contrast, the measures of distancing had strong internal reliability in field studies, with an average Cronbach's alpha of .78 in those seven studies. Given that measures of distancing (i.e., downplaying the personal implications of bad news) varied only slightly in wording between studies, it is unclear why we measured this construct more reliably in the field than in the lab. However, this measurement concern suggests that the findings for distancing should be interpreted with caution.

Despite these limitations, our investigation provides a strong test of our predictions across a large number of studies and participants. Future research can thus move forward and test deeper questions about the role (or lack thereof) of gender in the context of stressful waiting periods, as well as in coping with stress more broadly. One clear next step is to move beyond self-report measures of worry and coping to reduce the influence of impression management and social desirability, both of which may reflect differential gender socialization beyond any “true” gender differences in emotional experience.

Second, future research can aim to better understand the gender differences we revealed. We proposed at the outset of our paper that differential socialization is likely responsible for any gender differences in worry and coping that we might find. However, our studies were not designed to test the role of socialization. Studies that explicitly test the role of socialization (for example, by examining whether greater adherence to traditional gender roles exacerbates gender differences) are needed to provide evidence for the underlying process behind apparent gender differences in coping with uncertainty.

Finally, although we found no consistent evidence for gender differences in the links between worry and coping, future studies should tackle gender's role in other well-established waiting phenomena. For example, numerous studies have found that worry and coping tend to be most intense at the beginning and end of waiting periods (Sweeny and Andrews 2014)—Is that equally true for men and women? Similarly, studies have identified several personality traits that are closely tied to difficulties during waiting periods, including dispositional pessimism and intolerance of uncertainty—Are these traits equally problematic for men and women? Such studies would go beyond identifying simple gender differences to understand how gender might dynamically interact with environmental and intrapersonal factors to determine stress and coping outcomes.

Practice Implications

An additional direction for future research relevant to the current findings is to develop and test interventions that help people to wait well (Sweeny et al. 2016). By identifying “preexisting conditions” in various populations, these interventions can be geared appropriately toward groups with particular vulnerabilities. This strategy has promise, as suggested

in a study of recent law graduates who were awaiting bar exam results and were randomly assigned to engage in mindfulness meditation or a control meditation activity (Sweeny and Howell 2017). Individuals who were lower in dispositional optimism and higher in intolerance of uncertainty (traits reliably associated with a more difficult waiting experience) benefited most from the mindfulness intervention, suggesting that interventions can be fruitfully targeted to those who most need them.

Of course, our findings revealed that high-level worriers, although more likely to be women than men, cope similarly with uncertainty. Thus, a comprehensive strategy, useful to both men and women, would be to highlight the benefits of different strategies and experiences during the wait for uncertain news. Worry can be quite advantageous if its motivating properties are effectively harnessed (Sweeny and Dooley 2017), and people likely vary in how effective they find different coping strategies to be. An ideal approach to improving waiting experiences would be one that avoids stereotyping by gender and instead focuses on individuals' unique experiences of worry and coping to harness each person's strengths (see Shields 2013, for more on this approach). Our investigation provides a robust foundation on which such interventions can be built.

Conclusions

In *The Cobbler of Preston*, Christopher Bullock (1716) famously noted that “'tis impossible to be sure of any thing but Death and Taxes.” With due respect to Mr. Bullock, a third experience is nearly as assured: waiting for uncertain news. Regardless of age, nationality, profession, social class, and, pertinent to the current investigation, gender, everyone must wait for important news at various points in their life. Our findings suggest that although women and men may differ somewhat in their likelihood of facing high levels of worry and extensive efforts to cope during these stressful periods of uncertainty, they are more similar than they are different. When worry arises, as it does for most people during the most stressful of waiting periods (e.g., awaiting a biopsy result or the announcement of layoffs), men and women are equally likely to rifle their coping toolbox in an effort to confront the frustrating combination of uncertainty and a lack of control that waiting entails.

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Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

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